Amendments to the Specification:

Please replace the paragraph starting with "An optical coupler" beginning on page 22, lines 22-24 and ending on page 23, lines 1-19 with the following amended paragraph:

An optical coupler 110 splits its optical signal 1100 input into two output signals (in a 50:50 split, for example) to a first transmission line input unit 1120 and a second transmission line input unit 1130. In the first and second transmission line input devices 1120 and 1130, optical signal receivers 1122 and 1132 receive the two input signals from performance monitor ~~monitor and process~~ units 1124 and 1134 for monitoring performance of the optical signals and convert formats. Optical signal transmitters 1126 and 1136 perform wavelength conversion and output the resulting signals to the first and second transmission lines 120 and 130. In the first and second transmission line output units 1140 and 1150, optical signal receivers 1142 and 1152 receive the optical signals transmitted over the first and second transmission lines 120 and 130. ~~Optical Line~~ PPerformance ~~M~~monitor units 1144 and 1154 monitor performance or quality in the optical signals and conversion of formats. Optical transmitters 1146 and 1156 perform E/O conversion and output optical signals. ~~Optical Line P~~Performance ~~Monitor~~ monitor units 1144 and 1154 monitor the performance in the received signals, and output the results of the monitoring as 'signal performance monitor data' 1160 and 1170 for example. Signal performance monitor data 1160 and 1170 is the same monitor data as the signal performance monitor data 205 of Fig. 1. The optical couplers 1200 and 1210 respectively extract small samples such as 5% of the output signals from the first and second transmission line output units 1140 and 1150. Optical detectors including first optical detection unit 1220 and second optical detection unit 1230 monitor the signal strength of the optical signals that have been outputted by the first and second transmission line output units 1140 and 1150. The optical sensors 1220 and 1230 output their sensing results as 'optical signal strength monitor data' 1240 and 1250.

Please replace the paragraph starting with "Fig. 15 " beginning on page 24, lines 16-24 and ending on page 25, lines 1-17 with the following amended paragraph:

Fig. 15 is a block diagram illustrating a basic 1 + 1 optical switching configuration in which switching is performed by blocking the optical output signal of a transmission line output unit. The configuration of Fig. 15 does not use the signal performance monitor data 1160 and 1170 of Fig. 14, in which the performance monitoring results are sent. Therefore, blocking devices 1148 and 1158 are located in the first and second transmission line output units 1140 and 1150 to block the optical output signals. Reception signal performance monitoring is performed for quality in ~~optical line~~ performance monitor units 1144 and 1154, and the performance monitoring results are sent to blocking devices 1148 and 1158. As for the method of transmitting these results, any appropriate method includes separate lines in the transmission line output units 1140 and 1150 and empty areas of the signal frame. Based on the transmitted monitor results, the blocking devices 1148 and 1158 block the optical output of the first transmission line 120 or second transmission line 130 when the performance of either line is degraded. Optical couplers 1200 and 1210 extract small samples such as 5% of the optical signals from the first and second transmission line output units 1140 and 1150. Optical sensors 1220 and 1230 monitor the optical signal strength of output optical signals from the first and second transmission line output units 1140 and 1150 and output 'optical signal strength monitor data' 1240 and 1250, which contain information on the monitored optical signal strength. When a transmission line is determined to be faulty as a result of performance or quality monitoring by ~~optical line~~ performance monitor units 1144 and 1154 as described above, the signal of that transmission line will be blocked by one of the blocking devices 1148 and 1158. This will result in either of the lines to be faulty or low optical signal strength based upon by the corresponding optical detector or first optical detection unit 1220 or second optical detection unit 1230. A controller 230 is generally located within the apparatus and performs system monitor and control functions based on optical signal strength monitor data 1240 and 1250. Other than the above, this configuration is the same as that of Fig. 14.

Please replace the paragraph starting with "An optical coupler " beginning on page 26, lines 4-22 with the following amended paragraph:

An optical coupler 110 splits its optical signal 1100 input into two signals in such a manner as a 50:50 split to a first transmission line input unit 1120 and a second transmission line input unit 1130. In the first and second transmission line input units 1120 and 1130, optical signal receivers 1122 and 1132 receive the two input signals; ~~optical line~~ performance monitor units 1124 and 1134 monitor performance of the optical signals and convert formats. Optical signal transmitters 1126 and 1136 perform wavelength conversion, and output the resulting signals to the first and second transmission lines 120 and 130. In the first and second transmission line output units 1140 and 1150, optical signal receivers 1142 and 1152 receive the optical signals transmitted over the first and second transmission lines 120 and 130; ~~optical line~~ performance monitor units 1144 and 1154 monitor performance of the optical signals and convert formats. Optical transmitters 1146 and 1156 perform signal wavelength conversion and output the optical signals. Monitor-and-process units 1144 and 1154 monitor performance of the received signals, and output the results as 'signal performance monitor data' 1160 and 1170. For example, signal performance monitor data 1160 and 1170 are the same as the signal performance monitor data 205 of Fig. 1. The optical combiner 1260 combines the optical signals output from the first and second transmission line output units 1140 and 1150 and outputs the optical reception signal 1110. For example, the combiner is made using an optical coupler.